



UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/753,805 01/02/01 GORDON

G 10980359-6

EXAMINER

WM02/1002

AGILENT TECHNOLOGIES
LEGAL DEPARTMENT, 51 UPD
INTELLECTUAL PROPERTY ADMINISTRATION
P.O. BOX 58043
SANTA CLARA CA 95052-8043

KUMAR, S

ART UNIT

PAPER NUMBER

2675

DATE MAILED:

10/02/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/753,805

Applicant(s)

GORDON ET AL.

Examiner

Srilakshmi K. Kumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 16-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
3. Claims 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adan et al (US 6,172,354 B1).

As to independent **claim 16**, Adan et al disclose in Fig. 2, a hand held pointing device for a computer system, the pointing device comprising,
a housing (102) having a bottom surface that moves against a desktop surface; the housing also having a top surface shaped to receive the human hand; the housing also having a skirt connecting a perimeter of the bottom surface with the top surface; although Adan et al does not show the skirt connecting the top and bottom surface, it would have been obvious to one of

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ordinary skill in the art that this feature could have been incorporated into the system as input devices are usually shown with separate top and bottom surfaces;

the housing (102) also having a first axis extending generally in the direction from where the heel of the hand rests on the top surface to where the middle finger rests on the top surface, and a second axis perpendicular to the first, both axes parallel to the bottom surface as shown in Fig. 2;

an aperture in the bottom surface (106);

a source of non-coherent illumination (118, col. 4, lines 45-65) mounted within the interior of the housing, proximate the aperture, that illuminates, from a single location and with an angle of incidence in a range of about five to twenty degrees. Though Adan et al does not disclose the range of the angle of incidence, it would have been obvious to one of ordinary skill in the art that the angle of incidence could have been between five and twenty degrees as this would be the optimal range for best illumination;

a portion of the desktop surface (116) opposite the aperture (106) and having surface height irregularities forming a micro texture with feature sizes in the range of about five to five hundred microns, the illumination (118) producing highlights and shadows upon surface height irregularities that extend out of the desktop surface and that intercept the illumination and shadows upon surface height irregularities that extend into the desktop surface and whose illumination is blocked by adjacent surface height irregularities that are illuminated, the highlights and shadows forming a pattern that varies as a function of rotations and translations of the aperture relative to the desktop as shown in col. 4, line 45-col. 5, line 4 and col. 6, lines 14-24. Though, Adan et al does not specifically state the micro texture range to be between five and

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five hundred microns, in col. 6, lines 14-24, the input device is capable of detecting micro texture as small as a few microns. It would have been obvious to one of ordinary skill in the art that a "few" microns could be between five and five hundred microns;

an optical motion detection circuit (110) mounted within the interior of the housing and optically coupled to the highlights and shadows from the surface height irregularities of the illuminated portion of the desktop surface, the optical motion detection circuit producing motion signals indicative of motion in the directions along the first and second axes and relative to the surface height irregularities of the illuminated portion of the desktop surface as shown in col. 4, lines 45-53 and col. 6, lines 14-24;

wherein the optical motion detection circuit comprises a plurality of photo detectors (col. 5, lines 15-21) each having an output, a memory containing a reference frame of digitized photo detector output values and a sample frame of digitized photo detector output values obtained subsequent to the reference frame (col. 6, lines 25-33), and further wherein a plurality of comparison frames, each being a shifted version of one of the reference or sample frame, is correlated with the other of the reference or sample frame to ascertain motion in the directions along the first and second axes as shown in col. 6, line 34-col. 7, line 3;

As to independent **claim 19**, limitations of claim 16, and further comprising, wherein an arithmetic comparison mechanism coupled to the plurality of correlation values, and wherein the motion signals are not output to the computer system whenever a correlation surface described by the plurality of correlation values fails to exhibit a selected curvature as shown in col. 7, line 5-col. 9, line 23.

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As to independent **claim 20**, limitations of 16, and further comprising, wherein an arithmetic comparison mechanism having input coupled to the motion signals and wherein the motion signals are not output to the computer system whenever the motion signals indicate a velocity that exceeds a preselected limit as shown in col. 7, line 5-col. 9, line 23.

As to dependent **claims 17 and 18**, limitations of claim 16, and further comprising, wherein the optical coupling is preformed by a lens or a mirror as shown in col. 4, lines 54-65. Although Adan et al do not disclose the use of a mirror, it would have been obvious to one of ordinary skill in the art that the mirror would provide similar functioning as a lens.

4. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adan et al as applied to claim 16 above, and further in view of Scenna et al (US 5,894,302)..

As to independent **claims 21 and 22**, limitations of claim 16, and further comprising, wherein a switch disposed on the skirt in a location underneath the right thumb or left ring finger of a hand grasping the pointing device, that is coupled to the optical motion detection circuit and that inhibits the output of the motion signals to the computer system when the hand activates the switch by squeezing against the skirt in a plane parallel to the bottom surface in order to lift the pointing device away from the desktop surface. Where Adan et al fail to show a switch disposed on the skirt, Scenna et al disclose in col. 7, lines 16-43, a switch disposed on the skirt in a location underneath the (right thumb or left ring finger) or (left thumb or right ring finger) of a hand grasping the pointing device, that is coupled to the optical motion detection circuit and that inhibits the output of the motion signals to the computer system when the hand activates the switch by squeezing against the skirt in a plane parallel to the bottom surface in order to lift the pointing device away from the desktop surface. It would have been obvious to one of ordinary

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skill in the art to modify the input device of Adan et al to incorporate that of Scenna et al as it would enable the user to reposition the mouse device without affecting the input.

Response to Arguments

Applicant's arguments with respect to claims 16-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:

(703) 308-6606 (for informal or draft communications, please label

“PROPOSED” or DRAFT”)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal drive,

Arlington, VA, Sixth Floor (Receptionist)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srilakshmi K. Kumar whose telephone number is 703 306 5575.

The examiner can normally be reached on 8:00 am to 5:30 pm alternate Fridays off.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven J. Saras can be reached on 703 305 9720. The fax phone numbers for the organization where this application or proceeding is assigned are 703 306-0377 for regular communications and 703 308 9051 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305 4700.

Srilakshmi K. Kumar
Examiner
Art Unit 2675

SKK
September 29, 2001



STEVEN SARAS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600